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ABSTRACT

The final report (1974-75) of Project FAST (Functional Analysis Systems Training) contains objectives and evaluation data of the Essexville-Hampton (Michigan) program which is designed to provide efficient educational and support services to learning disordered children and their regular elementary teachers. The first part contains an introduction to the methods and purposes of the project. Described are the three modules for delivering educational services, nine basic teaching skills, a model of a learning system, and a flow chart of a delivery system which incorporates a change process. Listed are accomplishments such as reduction of the time lag between identification of pupils with learning problems and specific treatment, cost effectiveness, and demonstrated exportability. Evaluation data is provided for four performance objectives for each of two project goals--(1) the development and implementation of a demonstration and dissemination model, and (2) monitoring of project activities to show their impact on children. Information for each objective is presented in terms of source of information, analysis of data, date to be completed, and results. Evidence of effectiveness for 1973-74 is summarized and includes expansion of individual educational programs from 20 in 1971-72 to 149 in 1973-74. Appended is a description of a decision-making process for adopter districts to use to determine the goals and objectives for their district. (DB)

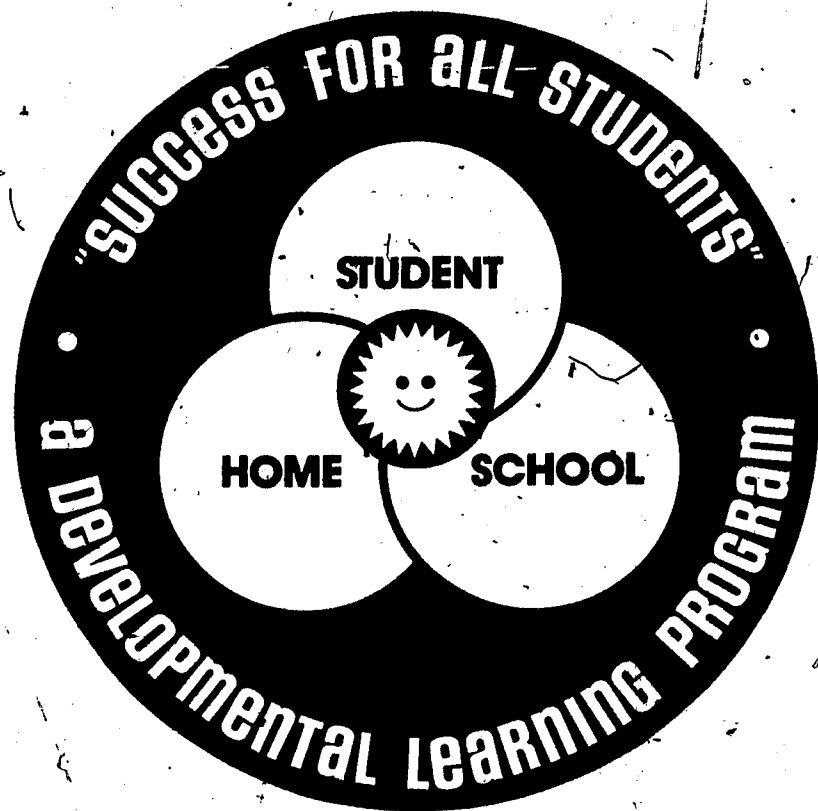
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PROJECT FAST



ESSEXVILLE-HAMPTON PUBLIC SCHOOLS
ESSEXVILLE, MICHIGAN 48732

A PROJECT OF

THE ESSEXVILLE-HAMPTON PUBLIC SCHOOLS

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INTRODUCTION

This final report 1974-75 of Project FAST is made up of three parts. The first part contains an introduction to the methods and purposes of the Project. The second part contains a statement of this year's goals and objectives. The evaluation on the objectives is based on data collected from teachers who volunteered for this year's program of demonstration and dissemination. The third part of the report contains the 1973-74 evaluation data. The final part of the report (appendix I) contains a decision-making process for adopter districts to use to determine the goals and objectives for their district. This report documents the development of the demonstration-dissemination program.

AN ECONOMICAL SYSTEM FOR THE DELIVERY OF EDUCATIONAL SERVICES TO CHILDREN WITH LEARNING DISORDERS WITHIN THE REGULAR CLASSROOM.

FAST's GOALS

Under usual circumstances, the regular classroom teacher is unable to find solutions to a wide variety of learning problems presented by children within the regular classroom. The mainstream teacher has sent "problem" children down the hall to various specialists who worked with those children on a one-to-one basis for short periods of time. Despite attempts at conferencing between specialists and teachers, many mainstream teachers did not have a comprehensive understanding of the total child nor of the various educational strategies needed to help the child overcome his problem.

Project FAST is a nationally validated project devised to meet two primary tasks: (1) provide more effective educational service to learning-disordered children through systematically training the mainstream teacher to become aware of the totality of a given child and to implement solutions to that child's problems on an ongoing basis; and (2) provide more efficient delivery of support service to the mainstream teacher in her/his efforts to help children overcome their problems and fulfill their optimal learning potential.

Project FAST conceptualizes a delivery of educational services in terms of modules of school personnel (see figure one) who are individually capable of delivering ongoing specialized services to the individual child. In the first service module, it is more effective and efficient for the mainstream teacher to have the training to deliver the bulk of service to most of the children within a classroom. Through retraining, the building principal then becomes the first line of support to the teacher in delivering comprehensive service to the vast majority of children.

In the second service module are school personnel who provide additional support to the teacher and the building principal. Module two is formed by retraining school psychologists, speech pathologists, and reading specialists so that they provide two-fold service: (1) generalized support to mainstream teachers in terms of classroom management and enrichment, identifying the causes of individual learning problems, aiding in the implementation of specific educational prescriptions, etc., and (2) to be consultants to other support persons in accord with their background on disciplinary training, focusing on a given child's particular area of need with which another support person may not be familiar. By retraining specialists personnel to fulfill these two missions, service from those persons becomes more economical. Specialists seeing and helping a greater number of teachers in turn provides help to a much larger number of children, making his service a more effective use of specialists.

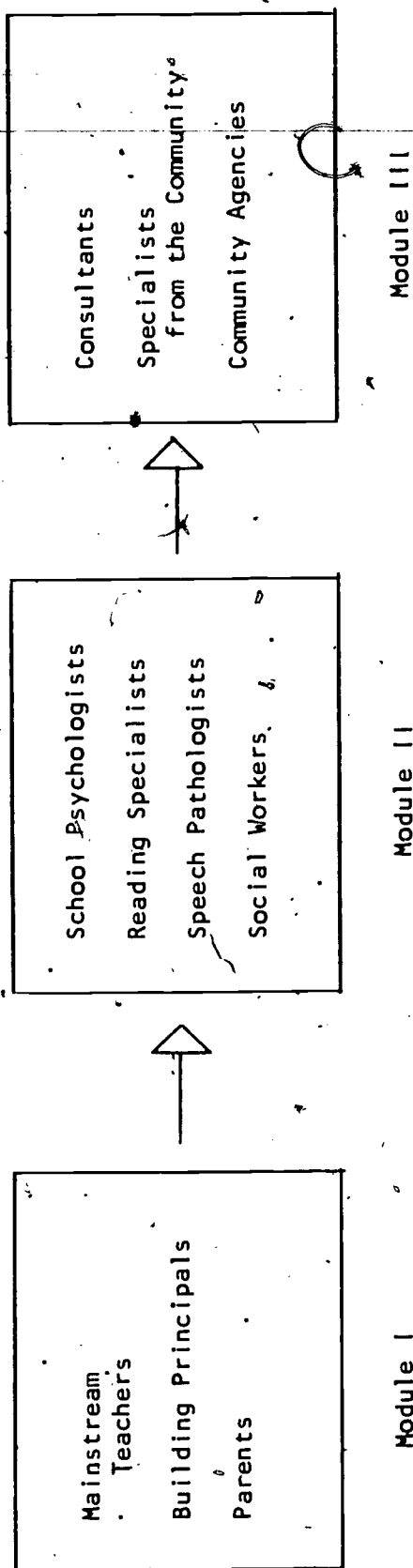


Figure 1
Modules for Delivering Educational Services
to Students

4

Personnel from module two visit each classroom at least once a week. This facilitates rapport between the support staff and the mainstream classroom teacher and also facilitates a reduction in the time lag between the identification of and the treatment for the learning disabled child. Since the support staff is in the classroom at least weekly, his recommendations for treatment are made in the context of the teacher's abilities and the classroom setting. A serious problem which existed prior to the implementation of the Project was the inability of the classroom teacher to carry out the recommendations of the specialists. This problem has been resolved by Project FAST.

In the third service module, consultants and specialists from the community are used to help find solutions to those relatively few problems for which personnel in Modules I and II cannot find satisfactory solutions.

The full innovativeness of FAST is that it develops a total, comprehensive delivery system with the synergistic effect of teachers, parents, consultants, and administrators targeting in a systematic manner on the developmental and learning processes of the specific child. Because it is a delivery system focused on the developmental and learning process, the teacher's development, the support personnel, the parent involvement, the utilization of learning materials, the organization of the classroom, the sequencing of instructional modules, and the media of experiencing learning all converge on the same objective:

To accommodate almost all students - slow and fast - as they progress toward optimal functioning in the regular classroom learning environment in an ongoing diagnostic, prescriptive, and evaluative process.

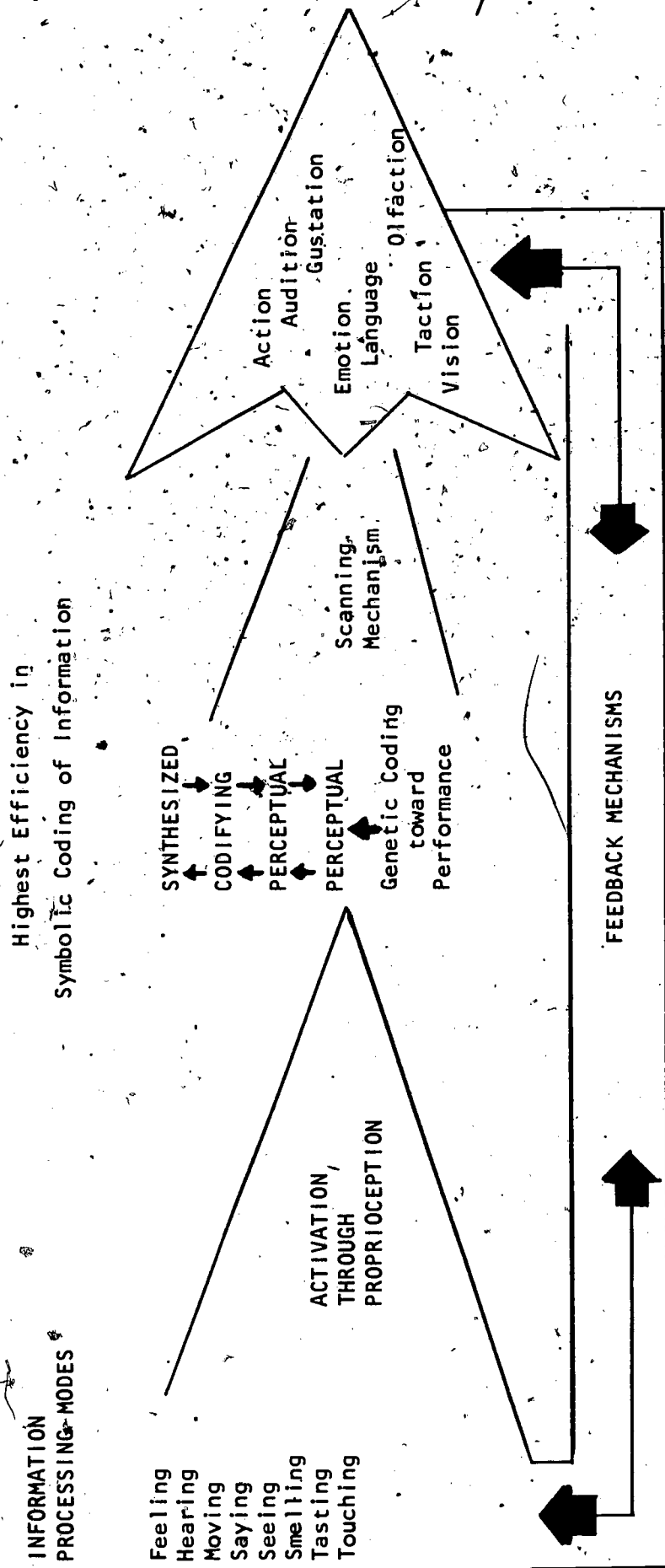
FAST'S RATIONALE

In view of our burgeoning knowledge and technology, a delivery system of education which is fact-centered is neither effective nor efficient. The delivery system instead must become centered on the processes by which children learn. For that to become a reality, the system must enable classroom teachers to have the tools they need to understand the learning process even when it is disabled. That requires, first of all, training in the understanding and application of nine basic teaching tools (see figure two). Second, it requires that teachers have a reliable roadmap of the learning system (see figure three). Third, it requires a delivery system which incorporates a change process (see figure four).

FIGURE 2

THE TEACHER'S TOOL KIT*

1. *Observing how students go about learning.*
2. *Analyzing what each task really demands of a student.*
3. *Deciphering the developmental level of the various skills a student needs to build for successful learning.*
4. *Prescribing the educational program a student needs next for his best development.*
5. *Organizing the classroom to promote active participation in learning.*
6. *Helping students to direct their own behavior appropriately.*
7. *Applying support help meaningfully.*
8. *Sharing teaching concepts and strategies so that more students are benefitted.*
9. *Teaming with parents to provide their children consistent opportunities for development.*



FUNCTIONAL LEARNING SYSTEM*
Figure 3



The basic purpose of the learning system- which is the same in child and adult, slow learner and fast learner - is to enable the individual to cope with whatever demands the environment makes on him. Toward that end, he has information processing modes that inform him of the environment. Information concerning the environment becomes more and more integrated and codified into more economical, usable bodies of knowledge, so that the individual can respond to environmental demands with an organized performance which is as effective and efficient as is possible for him at that point in his development. That goal, which is nature's underlying reason for having a learning system, is implemented through a complex process amid myriad mental activities. Nevertheless, through a delivery system which enables teachers to learn to read the roadmap that leads them through the learning system, they can understand the process by which children learn. Therefore, they can learn how to help children optimize their performance in response to environmental demands.

As teachers learn how to read that roadmap through the learning system, and they become more comfortable in applying the nine tools, they become more aware of how factors in the external environment influence the efficiency of the internal environment, or learning system. As their awareness grows of the relationship between the external and internal environment, teachers develop a true understanding of the wholeness of a child. Then they can devise learning opportunities which best will promote the child's total development.

Rather than cram the child's cranium with facts, they give him an opportunity to explore the world around him as well as the process

by which he himself learns. Instead of rote drill, the teacher provides the child with the opportunity to practice whatever he is in the process of learning - reading, spelling, math, - in activity and game form. Because all children like to play games, they do not become bored, and boredom is a large deterrent to learning. Instead enjoyable activities and games which provide the opportunity for practice enhance learning and the total development of the child.

Because the delivery system enables the teacher to be process-oriented rather than fact-oriented, children do not need to sit in rows, at military-erect attention. Instead, they can explore a variety of sources of knowledge and technology, as well as how they themselves learn, by moving from one learning center to another within the classroom. What they gain from the experience of actively participating in the process of learning is far superior to what they might gain by being passive witnesses to the teacher or the textbook hurling facts at them.

In this delivery system, teachers are not expected to be all things to children. Through training that the FAST Project provides, they are expected to develop a facility in understanding the process of learning so that they can observe a malfunction in the learning system and, when needed, refer the child to the appropriate specialist in the community for help. Similarly, teachers are not expected to know everything about all accrued knowledge and technology. Instead, they are expected to realize that knowledge is not the province of any one group. They are expected to make school a place where children enjoy the experience of living and of fulfilling nature's goal for childhood -- learning.

In this delivery system, teachers are expected to develop their understanding of how children grow emotionally, how they interact, and how they learn to manage their own behavior so that they do not need adults to police them constantly. Instead of policing children and keeping them in a rigid, lockstep order, teachers help them become aware of who they are, of who they can become, of how they influence each other through their behavior, and of what options they have in how they behave toward others in any given situation. Teachers share in the process of making goals and evaluating progress with children, and of keeping track of why children need certain activities. The key is that the teacher does with the child, not to him. Through such means, teachers help children develop respect for themselves and, thereby, for others. Teachers help children to become responsible for themselves and their own behavior, and, thereby, for others and for the society in which they live.

The above rationale makes it feasible for most children with learning disorders to be integrated successfully within the mainstream classroom, rather than to be isolated in special classes. For learning-disordered children to be able to succeed in the mainstream classrooms not only provides them with a healthy model to emulate and avoids stigmatizing them through separate labels and classes, but also enables the educational system to be more efficient and economical. An expected spinoff is that the FAST approach will also provide more individualized and optimized learning opportunities for average and fast learners.

Project FAST is a readily exportable program. Because of the close working relationship that the Bay-Arenac Intermediate School District has with the Essexville-Hampton and other school districts it serves, many components and concepts used in Project FAST have also evolved, to varying degrees, in other districts. The program developed by Project FAST has, in turn, been shared with the Bay-Arenac Intermediate School District and the sister districts, so that the two-county area now has a baseline of consolidated information to draw upon.

Project FAST accomplishes:

- * pronounced innovativeness as defined by the national validating team and by the Michigan State Board of Education.
- * real academic progress for the learning disabled child while providing important benefits for all elementary pupils.
- * accommodation to state guidelines and recent court rulings which demand that handicapped children be integrated into regular classroom whenever possible and that they receive realistic special help and benefit by appropriate resources.
- * reduction of the time lag between identification of pupils with learning problems and the specific treatment of those problems.
- * Cost-effectiveness because it retrain existing personnel and requires only a modest initial outlay for materials appropriate to learning centers.

* efficiency in getting "down the hall" specialists into the classroom where they can help more children, integrate their expertise into everyday instruction, and provide constant inservice education for the classroom teacher.

* demonstrated exportability. Six school districts in the surrounding area are already utilizing the program in 209 classrooms.

ESSEXVILLE-HAMPTON SCHOOL DISTRICT

PROJECT GOAL I

The Project staff will develop and implement a demonstration and dissemination model.

PERFORMANCE OBJECTIVE 1

Project staff will maintain an on-going operational program for on-site visitation purposes.

SOURCE OF INFORMATION

Educational prescriptions will be written by teachers and support staff throughout the year.

ANALYSIS OF DATA

Prescriptions will be analyzed by a jury of experts to determine kinds of services conducted. Teachers and Project staff will be interviewed to determine kinds of service given.

DATE TO BE COMPLETED

May, 1975

RESULTS

There are 203 students on prescription. One hundred and forty seven are in kindergarten and 156 in grades 1 through 6.

On a 30 point scale the prescriptions were rated from 8 to 30. The distribution of scores for the children in grades 1 through 6 is:

| SCALE SCORES | 1-5 | 6-10 | 11-15 | 16-20 | 21-25 | 26-30 |
|-------------------------|-----|------|-------|-------|-------|-------|
| NUMBER OF PRESCRIPTIONS | 0 | 6 | 19 | 23 | 40 | 58 |

(See Analysis of Educational Prescription in Appendix)

The teachers in the program were interviewed in May, 1975. There are 27 teachers in the program. Twenty-five or 92% of these teachers were using the methods and resources of the Project at the same level as or at a greater level than last year. The teachers were asked to compare this year's program and their involvement in the program on the following topics:

- a) Observe student learning
- b) Analyze student tasks
- c) Prescribe an educational program for a student
- d) Direct student behavior
- e) Work with teaching materials

PERFORMANCE OBJECTIVE 2

Project staff will develop an information package for potential adopters/adapters.

SOURCE OF INFORMATION

A sample of potential adopters/adapters will respond to a questionnaire and the records of the Statewide Facilitator will be reviewed.

ANALYSIS OF DATA

The extent of the information package will be summarized.

DATE TO BE COMPLETED

June, 1975

RESULTS /

The information package has been developed for the Project.

It consists of:

- A mailer - "Does Your Educational System Need FAST?"

- A summary of the Project. This booklet presents the goals, rationale, evidence of project effectiveness, and a sequence of project adoption/adaption.

- A pamphlet and video tape on the hyperactive child.
"Hyperactive Children: You Are Not Alone."

- A booklet written by parents on the Hyperactive Child.

- Facts For FAST - These are forms filled out by potential adopters/adapters.

- A video tape case study.

- A report on a conference sponsored by Project FAST.
"The Educator's Role In Developing The Basic Sub-skills of Vision."

- A booklet - "Project FAST: An Overview of Training."

- A slide-tape presentation - "Project FAST: An Overview of Training."

- A slide-tape presentation - "An Overview of FAST."

A 16 mm color film (30 min.): Project FAST.

A video tape - "Questions and Answers." Project teachers answer questions most commonly asked by visitors to the Project.

"Project FAST - How To Do Box." This box will contain approximately 500 5x8 cards organized into a diagnostic/prescriptive teaching system. This set of materials will be used as part of the project training package. (Target date to be completed is September, 1975).

RESPONSE TO THE INFORMATION PACKAGE

A. One signed contract with the Brighton Public Schools, Brighton, Michigan for implementation of the program.

B. Two contracts pending:

1. Dickenson Junior High School, Livonia Public Schools, Livonia, Michigan
2. Ausable-Crawford School District, Ausable, Michigan.

All three have been on-site and have set goals and have filled out "FACTS FOR FAST".

PERFORMANCE OBJECTIVE 3

Project staff will disseminate an awareness package for potential adopters/adapters.

SOURCE OF INFORMATION

A log of dissemination activities will be kept by project staff.

ANALYSIS OF DATA

A summary of dissemination activities will be reported in the interim and final reports. This summary will indicate the type and extent of dissemination.

DATE TO BE COMPLETED

August, 1975

RESULTS

Forty people received a copy of "The Educator's Role In Developing The Basic Sub-skills of Vision."

The movie was shown 6 times out of the school district.

Forty people visited the Project. This involved 10 separate groups. The largest group was 10 and the smallest group was 2.

Six presentations were made at different conferences or meetings. A total of approximately 300 people were in attendance at these presentations.

Also a static display was available for project awareness information.

Dissemination from the FAST Office:

295 Information Packages were sent out.

Dissemination from Project INFORM

| | |
|----------------------------|-----|
| Total number of requests | 550 |
| Special Education requests | 337 |
| Staff training requests | 213 |
| In depth Information sent | 45 |

PERFORMANCE OBJECTIVE 4

Project staff will develop criteria for selecting potential adopters/adapters.

SOURCE OF INFORMATION

The statement of the criteria.

ANALYSIS OF DATA

The criteria will be reported in Final Evaluation Report.

DATE TO BE COMPLETED

June, 1975

RESULTS

The criteria has been developed and follows:

FACILITATING ADOPTER/ADAPTER COMMITMENT TO PROJECT FAST

With the information provided in the FACTS FOR FAST, Project staff will help the potential adopter/adapter finalize their commitment.

Prior to training, Project FAST requires a self-screening process with a representative decision-making group process to establish teacher and administrative readiness to adopt/adapt.

Each potential adopter/adapter will leave this session with:

- 1) Increased personal participation and commitment to the goals and objectives so there will be
- 2) Increased follow-through on implementation of the decisions. The end product will result in an adopt/no adopt recommendation. Those receiving a no adopt recommendation will leave with a set of goals and objectives to search out alternative solutions to achieve their desired ends.

The decision-making group should be composed of representatives of each facet of the groups involved in that school system. In general, those groups would be:

- a) Board members, representing the community
- b) Central administration
- c) Principals interested in FAST
- d) Teachers interested in FAST and in representing the local education association.

This self-screening process will involve approximately five and one half hours. The following is a breakdown of time for the four sessions encompassed in the process:

1) Brainstorming

One hour, including a 10-minute break

2) Pyramiding

One hour, including a 15-minute break

3) Consensus

One and one half hours

4) Decision Making

One and one half hours, including a 10-minute break

CRITERIA TO BE USED BY DEVELOPER-DEMONSTRATORS IN THE SELECTION OF ADOPTERS:

The prospective adopter district must go through a process of identifying and clarifying its own goals, needs, and objectives.

Implementation procedures are geared toward districts whose administrators are prepared to adopt a developmental philosophy.

Teachers and other personnel should be allowed to decide whether or not to volunteer to participate in the program. Their participation should not be imposed on them by administrative mandate.

The administration of the prospective adopter district, including board members, superintendent and principals, must be ready to demonstrate their intent to adopt the Project by supporting it through their own emotional investment and active participation in it.

The prospective adopter district will be prepared to make financial commitments for equipment and supplies totaling \$600 to \$1,000 per participating classroom, plus ten days of time for one of their personnel to attend a workshop to learn how to serve as a facilitator.

CRITERIA TO BE USED BY DEVELOPER/DEMONSTRATOR IN THE REJECTION OF ADOPTERS:

A questionnaire, FACTS FOR FAST, will provide the FAST staff with pertinent information about the adopter district and must be completed before training can occur.

During the Decision-Making process, involving a cross section of the adopter district staff, the group will establish goals and objectives for the adopter district. If there is no degree of similarity of priorities between FAST and the adopter district, rejection will be automatic.

Lack of administrative support.

Lack of financial support.

Lack of resources, especially support staff who must have
change agent skills.

PROJECT GOAL II

Project activities will be monitored to show the impact of the Project activities on children.

PERFORMANCE OBJECTIVE 5.

The Project will demonstrate a model instructional system which accommodate the individual needs of students with varying abilities and handicaps within the regular classrooms.

SOURCE OF INFORMATION

Teacher interviews, Analysis of Educational Prescriptions, and Parent-Child-Teacher conference forms.

ANALYSIS OF DATA

The interviews will indicate the extent of individualization of instruction. The educational prescriptions will be juried by experts to show the effectiveness of the prescriptions. The number of Parent-Child-Teacher Conferences will be compiled.

DATE TO BE COMPLETED

July, 1975

RESULTS

Of the 203 children on prescription 90% or 183 were involved in Parent-Child-Teacher Conferences.

The distribution of scores on the Analysis of Educational Prescription is reported under Objective 1.

All of the Project teachers are individualizing the educational program for those children on prescription:

PERFORMANCE OBJECTIVE 6

The role of the local school district, the Intermediate School District, and other community agencies serving the child with learning problems will be supportive by working with and through the classroom teacher in the daily situation.

SOURCE OF INFORMATION

Interviews with the teachers and School Support Staff.

ANALYSIS OF DATA

A descriptive summary of methods used within the local school district will be compiled.

DATE TO BE COMPLETED

May, 1975

RESULTS

The School Support Staff are in the classrooms on a regular basis.

PERFORMANCE OBJECTIVE 7

Teacher attitude toward their role as the vehicle serving the child with learning problems will be positive.

SOURCE OF INFORMATION

Teacher interviews

ANALYSIS OF DATA

A descriptive narrative will be reported.

DATE TO BE COMPLETED

August, 1975

RESULTS

All of the teachers who were interviewed indicated that they support the role of the teacher as one who also serves the child with learning problems. The term "learning problems" means a child who could otherwise be placed in a special education room. Children who have learning problems have been intergrated into the normal classroom with the exception of the child who is severely handicapped.

PERFORMANCE OBJECTIVE 8

The academic achievement of students with learning problems will be improved.

SOURCE OF INFORMATION

Pre and posttesting with The Metropolitan Achievement Test in September, 1974, and May, 1975.

ANALYSIS OF DATA

The children who receive a high implementation of the Project methods will be compared with those children who receive a low implementation. Analysis of covariance will be used in the data analysis with the pretest used as the covariate and the posttest used as the criterion or dependent variable.

DATE TO BE COMPLETED

July, 1975

RESULTS

In both reading and mathematics the High Implementers achieved at a higher level than the Low Implementers.

(TECHNICAL NOTE: Complete test data was Collected from 145 children in grades 1-6. The educational prescription was analysed for each child. Each prescription was documented with respect to the type of program received by the child. Those children who received a program consistent with the methods of Project FAST received a high rating while those children who received a different program were given a low rating on the Analysis of Educational Prescription. This rating only includes those children who were given some type of comprehensive program. Forty-two children who received the highest rating were compared with the 42 children who received the lowest rating. Thus forming the two groups. The two groups did not differ on the pretest. This comparison was made using the analysis of variance on the pretest with $\alpha = .01$. The rating was done by the teacher support personnel.)

ANALYSIS OF COVARIANCE TABLE FOR READING

| | DF | ANOVA S.S. | S.S. (DUE) | S.S. (ABOUT) | DF | MEAN SQ |
|-----------------------------------|----|---------------|---------------|-----------------|----|------------|
| TREATMENT (BETWEEN) | 1 | 1525.8 | | | | |
| ERROR (WITHIN) | 82 | 26876.0 | 20691. | 6185.6 | 81 | 76.366 |
| TOTAL | 83 | 28402.0 | 20854. | 7547.7 | 82 | |
| DIFFERENCE FOR TESTING ADJ. MEANS | | | | 1362.1 | 1 | 1362.1 |

$F(1.81) = 17.835930$

ATTAINED SIGNIFICANCE LEVEL IS LESS THAN .01

TABLE OF ADJUSTED MEANS READING

| | MEAN | ADJUSTED MEAN |
|-------------------|--------|---------------|
| HIGH IMPLEMENTERS | 61.047 | 60.812 |
| LOW IMPLEMENTERS | 52.523 | 52.758 |

ANALYSIS OF COVARIANCE TABLE FOR MATHEMATICS

| | DF | ANOVA S.S. | S.S. (DUE) | S.S. ABOUT) | DF | MEAN SQ |
|-----------------------------------|----|---------------|---------------|----------------|----|------------|
| TREATMENT (BETWEEN) | 1 | 2211.4 | | | | |
| ERROR (WITHIN) | 82 | 28674.0 | 16623.0 | 12051.0 | 81 | 148.78 |
| TOTAL | 83 | 30886.0 | 17030.0 | 13856.0 | 82 | |
| DIFFERENCE FOR TESTING ADJ. MEANS | | | | 1804.9 | 1 | 1804.9 |

$F(1,81) = 12.131946$

ATTAINED SIGNIFICANCE LEVEL IS LESS THAN .01

TABLE OF ADJUSTED MEANS MATHEMATICS

| | MEAN | ADJUSTED MEAN |
|-------------------|--------|---------------|
| HIGH IMPLEMENTERS | 72.261 | 71.769 |
| LOW IMPLEMENTERS | 62.000 | 62.492 |

EVIDENCE OF EFFECTIVENESS 1973-74

- GOAL 1.0** The project will demonstrate a model instructional system which accommodates the individual needs of students with varying abilities and handicaps within the regular classroom.
- OBJECTIVE 1.1** The FAST system will be active in over 20 district classrooms in the 1972-73 school year:
- DATA COLLECTION** Classroom observations and teacher interviews were conducted. The target population was all teachers who declared themselves to be in the program.
- RESULTS** The demonstration model is described above. Thirty-four of 41 elementary teachers have voluntarily taken the in-service training and have installed the program in their classrooms. Sixteen special education students have been phased out of the special education classes, and four students in the special education classroom are receiving prescriptions through Project FAST. All 34 teachers continued the program in 1973-1974.
- OBJECTIVE 1.2** Children with learning disorders will receive an educational program tailored to their individual needs.
- DATA COLLECTION** A review was made of the prescriptions which are kept on file in the office of the building principal. This review was done by experts in the field of learning disabilities.
- RESULTS** Valid educational programs tailored to the individual needs of specific students with learning disabilities were implemented in 20 cases in 1971-1972, 79 cases in 1972-1973, and 149 cases in 1973-1974.
- OBJECTIVE 1.3** All Project FAST teachers will implement the FAST system by:
- (a) utilizing learning centers rather than maintaining children row on row.
 - (b) individualizing instruction at least for all children with learning problems.
 - (c) writing educational prescriptions for those children who show learning disabilities.
 - (d) participating in parent-child-teacher conferences designed to facilitate the child's progress.
- DATA COLLECTION** Classroom observations and teacher interviews were conducted. Building principals have documentation that appropriate parent-child-teacher conferences have taken place.

RESULTS

Thirty-four classrooms have installed the FAST system. Of these, 82% are fully activity-centered and involve several individual and small-group activities occurring simultaneously. The others are partly activity-centered and progressing toward that goal. Thus, the students themselves cannot discern which of their peers have been designated "learning disabled." The validation committee in 1972 stated that, "the Project is being implemented in a very effective manner and has involved new teachers at a credible rate."

GOAL 2.0

The role of the local school district, the Intermediate School District, and other community agencies serving the child with learning disabilities will be more supportive by working with and through the classroom teacher in the daily situation.

OBJECTIVE 2.1

Support personnel will be integrated into the support modules for the classroom teachers rather than used exclusively to provide direct services to children as they did traditionally.

DATA
COLLECTION

Data was taken from the records of the Bay-Arenac Intermediate School District and from interviews with support persons.

RESULTS

The objective is documented under Cost Effectiveness. A description of the module organization is included in the description of the project. The specialists have taken on a more consultative "backstop" role with more responsibilities delegated to the teacher. Referrals to the school psychologist (which are usually for certifying children for special education) have dropped from 35 to 19 to 5 (for the half-year 1972-73). The school psychologist has doubled the number of students he is able to add to his caseload by eliminating the diagnostic write-up and sub-jointly with the teacher. Further, each specialist provides constant in-service education to the teacher while pursuing his normal duties. His work has direct impact upon curriculum.

GOAL 3.0

Community involvement will take an active, continuous, and supportive role in the educational process.

OBJECTIVE 3.1

Parents will share in the educational programming and prescriptions.

DATA
COLLECTION

Each building principal keeps a record which includes all learning prescriptions and written descriptions of all parent-teacher or parent-teacher-child conferences which take place.

RESULTS

All teachers in the program are now sharing information on student prescriptions with interested parents.

OBJECTIVE 3.2

At least six evening programs for parents will be held each year on substantive topics of child development.

DATA
COLLECTION

A survey conducted by the Citizens' Communication Council, minutes of parent meetings, and interviews with key persons in the groups form the basis for evaluation of this objective.

RESULTS

Parent interest groups have held meetings on the hyperactive child, vision impairments, reading development, and general child development. Average attendance for six meetings during the 1972-1973 school year was 70 parents. One group produced a handbook on hyperactivity for the benefit of those outside their group. A survey conducted in February, 1974, by the Citizens' Communication Council indicates that parents' attitudes toward the district's elementary schools all of which have the program, are positive.

GOAL 4.0

Teacher attitude toward their role and the vehicle serving the learning-disabled student in their classrooms shall be positive.

DATA
COLLECTION

Teacher interviews were conducted both by the national validators and by the evaluator. The Kerlinger Educational Scale VII, which deals with teacher philosophy, was administered to teachers in the project. Report cards written by project teachers during the last five years were analyzed with respect to positive comments on specific learning objectives contained in the report card. Also, a study of the report cards was conducted by a committee comprised of teachers, school administrators, and community members.

RESULTS

The national validators interviewed ten project teachers at random and determined that their attitudes toward the program were very positive and that the program was "no slick PR job." Nineteen teachers were interviewed by the evaluation team with several results. Teacher job satisfaction remained high despite the admission that the program is "demanding" and "more work." The only problem which showed up repeatedly concerns the amount of paperwork connected with the program.

The Kerlinger Educational Scale VII indicates that the attitude of the instructional staff ranges from moderately conservative to open. Teachers have exercised leadership in approaching the Board of Education and obtaining a program-facilitating schedule change. This seems to indicate a perception that they can "make things happen."

A five-year analysis of report cards indicates that the comments have grown consistently more constructive each year of the program in several respects. Positive comments on specific learning objectives increased.

One result of the study of report cards is that a new report card form was adopted during the 1973-1974 school year. This report card reflects the philosophy of the project.

GOAL 5.0

The academic achievement of students with learning disabilities will be improved.

DATA COLLECTION

The target population for this component was composed of 130 school children in grades 1-6. Each child in the target population was certified as having an appropriate diagnosis of a learning disability. This certification was done by a jury of experts composed of support people, the project director, consultants to the project, and teachers.

The rating of each prescription (see page 35) was used to differentiate between students who had received a high level of implementation of project ideas and methods and those who received a low implementation. Approximately thirty percent of the students received a rating above or equal to 27, and approximately thirty percent received a rating below or equal to 17.

A comparison of these two groups was made using an F-test. Achievement scores in reading and mathematics were collected using appropriate levels of the Metropolitan Achievement Test. Pre-test data was used as a covariate, and post-test data was used to compare the groups.

The research hypotheses are:

1. The level of reading achievement of children identified as receiving a high implementation of project ideas and methods will be greater than the level of reading achievement of those receiving a low implementation.
2. The level of mathematics achievement of children identified as having received a high implementation of project ideas and methods will be greater than the level of mathematics achievement of those receiving a low implementation.

RESULTS

Each research hypothesis is true. The achievement levels in both reading and mathematics are statistically significant to the .01 level for those children receiving a high level of implementation of project ideas and methods.

READING ACHIEVEMENT

| | # of observations | mean in grade equivalent scores | standard deviations |
|---------------------|-------------------|------------------------------------|------------------------|
| HIGH IMPLEMENTATION | 37 | 3.9 | 1.7 |
| LOW IMPLEMENTATION | 38 | 3.2 | 1.2 |

F=14.355 which is significant at .01 level

READING GRADE EQUIVALENT SCORES
TABLE OF MEANS

| GROUPS | VARIABLES | | | |
|---------------------|-----------------------|------------------------|-----------------------|----------------------|
| | COVARIATE PRE-TEST | DEPENDENT POST-TEST | ADJUSTED DEPENDENT | STANDARD ADJUSTED |
| HIGH IMPLEMENTATION | 2.854 | 3.973 | 3.941 | 1.614 |
| LOW IMPLEMENTATION | 2.787 | 3.221 | 3.252 | 1.592 |

MATHEMATICS ACHIEVEMENT

| | # of observations | mean in grade equivalent scores | standard deviations |
|---------------------|-------------------|------------------------------------|------------------------|
| HIGH IMPLEMENTATION | 37 | 4.2 | 1.5 |
| LOW IMPLEMENTATION | 38 | 3.6 | 1.2 |

F=13.881 which is significant at .01 level

MATHEMATICS GRADE EQUIVALENT SCORES
TABLE OF MEANS

| | VARIABLES | | | |
|---------------------|-----------------------|------------------------|-----------------------|----------------------|
| | COVARIATE PRE-TEST | DEPENDENT POST-TEST | ADJUSTED DEPENDENT | STANDARD ADJUSTED |
| HIGH IMPLEMENTATION | 2.989 | 4.257 | 4.203 | 1.823 |
| LOW IMPLEMENTATION | 2.884 | 3.624 | 3.676 | 1.799 |

ANALYSIS OF EDUCATIONAL PRESCRIPTIONS

RATING

1. Are the objectives clearly stated? _____
2. Are specific methods listed to implement the objectives? _____
3. Are the methods listed relevant to the objectives? _____
4. Has feedback (outcome) been utilized for reformulating the prescription when an objective has not been achieved? _____
5. Have the skill deficiencies to be remediated in "objectives" been confirmed as accurately diagnosed by the support person / consultants? _____
6. In "outcome" were the objectives finally achieved? _____

TOTAL SCORE

| | | |
|-------------------|------------------------|--|
| 1 = NOT VISIBLY | 0% - 20% OF THE TIME | |
| 2 = SLIGHTLY | 21% - 40% OF THE TIME | |
| 3 = SOMEWHAT | 41% - 60% OF THE TIME | |
| 4 = SUBSTANTIALLY | 61% - 80% OF THE TIME | |
| 5 = COMPLETELY | 81% - 100% OF THE TIME | |

FACILITATING GROUP DECISION MAKING

PRECAUTIONS TO THE FACILITATOR: The objectives for helping a group make decisions about its functions are (1) increased personal participation and commitment so that there will be (2) increased follow-through on implementation of the decisions. To achieve those objectives, there must be active participation in the decision-making process by all facets of the groups represented. That is important at each step in the decision-making process, but special precautions will be highlighted when specifically applicable.

GROUP COMPOSITION: First be sure that the decision-making group is composed of representatives of each facet of the groups involved in that school system. In general, those groups would be:

- (a) Board members, representing the community
- (b) Central administration
- (c) Principals interested in FAST
- (d) All teachers interested in FAST and those representing the local Education Association
- (e) Specialists from the local and/or intermediate district.

Ideally, each facet (a through e) should be represented by:

(1) more than one person, so that he/she does not feel "I have to hold my own against all those others"; (2) no more than 4 persons (exception, teachers) so the total number of the decision-making group does not exceed 20 to 30; (3) those who are in authority in the group, either because of the office they hold or because they are respected and trusted by the group; (4) persons able to stay during the entirety of each scheduled meeting, to avoid the discontinuity and fragmentation from persons coming and going; (5) persons capable of examining varied viewpoints, but not those who are afraid of voicing and discussing conflicting viewpoints--because it is important for conflicts to be aired and resolved if the original objectives for the decision making are to be fulfilled.

DECISION-MAKING PROCESS

NOTE TO FACILITATOR:

(1) The information sheet (Facts for FAST) should be studied prior to the meeting of the decision-making group. If any aspect of the information is not clear, the facilitator should explore those points more fully with whomever filled out the questionnaire.

The information for the questionnaire is used by the facilitator as a guideline to (a) what objectives are realistic, (b) possible points of conflict between FAST procedures and

local possibilities, (c) pitfalls that could stall implementation, (d) additional information which may be needed before legitimate decisions can be made.

(2) Each person who is to participate in the decision-making process should receive the appropriate written information on FAST's goals, objectives, implementations, and findings in time to study the information thoroughly - preferably at least one week before the first decision-making session.

SESSION 1: BRAINSTORMING

- A. Approximate time required: 1 hour, including a 10-minute break.
- B. Materials needed: Large chalkboard area, or at least one wall covered with white butcher (craft) paper; or an overhead projector with a roll of plastic attached, plus a projection screen; a person who can act as secretary for group, writing down ideas at the direction of the facilitator; a room large enough to accommodate the needs of Session 2; the chairs should have an arm to write on, or else each participant should have a writing board; a pad of paper and a pen for each participant.
- C. Purpose: Identify the school district's totality of desired goals and specific objectives.
- D. Procedure:
 - 1. Participants are seated in a "V", so that each can see what is written and also each other. No one sits behind someone.

2. The facilitator emphasizes that the purpose of this session is to promote creativity, and that means all ideas are welcome. No idea should be stifled because it seems way out, or impractical, or because someone else might think it is foolish. Creativity always starts with wild ideas - examples are men flying, landing on the moon, laser beams, etc.

3. The facilitator solicits goals - no matter how globby they may be. Each goal is written down.

4. Usually, as goals are elicited, they become somewhat more specific and subordinated into specific objectives subsumed under particular goals. The facilitator should ignore the fact that this is happening, making no attempt to discriminate in any way between goals and objectives at this time. All should be written down in telegraph form.

5. If the momentum of the brainstorming has not slackened off by 45 minutes, the facilitator should set a 5-minute deadline.

6. The facilitator must be aware of semantics; many goals will mean the same thing - just put them up. The semantics can be handled at the end. Proper wordage can be taken care of later.

7. Then a 10 or 15-minute break is taken.

SESSION 2: PYRAMIDING

- A. Approximate time required: 1 hour, including a 15-minute break.
- B. Materials needed: Four tables which can comfortably accommodate six persons, in a room large enough so that each of the four groups can interact without disturbing the other groups.
- C. Purpose: To evaluate and condense the totality of goals and objectives given in Session 1 into a workable number of goals and objectives which are realistic to implement.
- D. Procedure:

1. Participants are divided into no more than four groups of five or six. The groups should be heterogeneous in terms of the five facets represented. A simple way to achieve that is to have all participants count off in series of four. Then all the "ones" form a group, all the "twos" form another group, etc. In that way co-workers and friends, who usually sit next to each other, will not be in the same group.

2. Participants are told that they have 45 minutes to review and evaluate all the goals and objectives suggested in Session 1 (these have been copied and run off) and to condense them into a total of no more than 4 goals under each of which is subsumed no more than 5 specific objectives. The reason for "pyramiding" is

explained: As the goals and objectives are evaluated, they usually can fit into each other. One goal or objective can join with and build on another to emphasize the desired intent and to clarify the meaning that the goal or objective is trying to convey. As a consequence, the total number of desired goals and objectives becomes smaller, better elaborated and more representative of the group's wishes.

3. Each group must choose a secretary who will
 - (a) record the outcome of the group's discussion and
 - (b) present those conclusions in Session 3.

4. After 40 minutes, a five-minute warning is given. After 45 minutes, there is a 15-minute break.

SESSION 3: CONSENSUS

- A. Approximate time required: 1 1/2 hours.
- B. Materials needed: Same as Session 1.
- C. Purpose: For the participants to agree on all the goals and objectives from which they will choose the ones they want to accomplish.
- D. Procedure:
 1. The small groups are dissolved and the total group returns to the "V" seating arrangement of Session 1.
 2. The facilitator indicates that each group has pyramided its ideas into no more than four goals with no more than five objectives for each which are most representative of what they want to achieve in their school

district. Each group now will present these, so that the total group can discuss the similarities and differences of their thinking.

3. During the break, copies of each sub-group's conclusions from Session 2 have been run off for each participant.

4. The facilitator then encourages discussion of similarity and difference of thought concerning the goals and objectives. This discussion is not written up by the secretary, so that it remains free-flowing, orchestrated by the facilitator.

5. Conflicting and minority opinions should be pursued and encouraged by the facilitator, if they are not elaborated spontaneously, so that they are stated clearly and in enough detail to be weighed against each other.

6. When divergent opinions are aired, the statements should be confined to the details of that opinion and the relevance of those details to the school district's needs. The facilitator must keep the discussion from deteriorating into personal attacks, derogatory digs, or sweeping over-generalities that are in the service of making a personal win-lose point rather than contrasting the divergent objectives with a sufficient number of pertinent details to resolve the conflict.

7. The facilitator also should lead the group away from premature agreement just to "make peace," or "get on with the task." Such premature agreement can bury real points of contention and, therefore, impede group commitment to the final goals and objectives of the project.

8. If it does not occur spontaneously, the discussion should be directed by the facilitator toward all participants feeling a sense of responsibility for the successful accomplishment of the finalized goals and objectives.

9. The discussion of divergent opinions should not be closed before all participants express a genuine feeling of being able to live with, or at least try out on an experimental basis, all the finalized goals and objectives.

10. Consequently, Session 3 may require more than the anticipated amount of time. It is important for the facilitator to help all participants to realize that consensus is the very heart of cooperative group activity and therefore, is well worth the time invested in it. It must not be hurried, out of expedience. That would only rob the group of a truly meaningful and useful consensus. This is very important.

11. As the goals and their concomitant objectives reach group consensus, the total group breaks into the four sub-groups. Each sub-group is assigned a goal (the four agreed on in Consensus). The sub-groups will write 10 objectives for their goal, based on the consensus of the total group. The sub-group secretary writes the goal and 10 objectives on a Q-Sort Decisionnaire form, so that these can be copied on a Thermo-Fax and run off for each participant in the total group.

SESSION 4: DECISION MAKING

- A. Approximate time required: 1 1/2 hours, including a 10-minute break.
- B. Materials needed: Copies of Q-Sort Decisionnaires for each participant, a pencil for each participant, ample space for each participant to work alone, a hand calculator.
- C. Purpose: To select those objectives most important for achieving each of the consensus goals.
- D. Procedure:
 - 1. Each participant is given a pencil and also a copy of the Q-Sort Decisionnaire for each consensus goal. They seat themselves where they can write comfortably.

2. Each participant decides whether he/she regards objective number one as being more or less important to the achievement of that goal than is objective number two. The number of the objective decided upon is placed to the right of the statement of objective number one, in the box immediately below objective number two, i.e., either a 1 or a 2.

3. The same decision-making process is followed for the comparison of objective number one and objective number three, with either a 1 or a 3 finally being placed in the box immediately beneath objective three and to the right of the statement of objective number one.

4. The rule is that each objective is compared in turn with every other objective, and the number of the objective regarded as more important to the achievement of that goal is written in the appropriate box.

5. Then the total number of "1s" recorded is written in the column entitled "Total", across from the statement of the first objective. The total number of "2s" recorded is written in the column entitled "Total," across from the statement of the second objective. That procedure is followed for all ten objectives.

6. Complete objectives for Goal #1 on the Q-Sort before going on to Goal #2.

7. Steps 2 through 5 are repeated for each goal.

8. While the comparison of objectives is being completed, the facilitator will organize a recording area visible to all the participants. As each participant completes the comparison of the objectives for each goal and the tallying of his/her response, he/she will record the responses in the place provided by the facilitator. The tally area for each goal will simply be the number of the goal and then the number of each objective underneath the goal number, with an appropriate number of boxes to the right of the objective number for each participant to record the number of times he/she chose that objective. When all of the participants have recorded their responses for each goal, the group secretary and the facilitator will add the responses for each objective and record the total to the left of the number for that objective.

9. The group secretary records each goal with the objectives of that goal in the order of group preference. (The objective receiving the highest tally will be first, second highest second, etc.)

10. The facilitator then helps the group decide how many and which specific objectives for each goal they want to commit themselves to try to accomplish.

Q-SORT DECISIONNAIRE

GOAL:

GOAL NUMBER

OBJECTIVE LINE NUMBER

OBJECTIVES

TOTAL

10

9

8

7

6

5

4

3

2

10

9

8

7

6

5

4

3

2

1

ACKNOWLEDGEMENTS

"We want to Grow, to Create, to
Produce. This is possible only
if we are willing to Change."

Author Unknown

- . . . To the Essexville-Hampton Board of Education and Superintendent, Quintin Cramer, without whose support this project could not have prospered.
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- . . . To the students of Bush, Hughes, and Verellen Schools who helped us grow, create and produce.
- . . . To all others whose commitment to action became an obsession to face education of children squarely, honestly and creatively.

Thank you for your interest in Project FAST.

We have a 16 mm color film of the project which is available upon request at a rental fee of \$20.00, plus insurance and postage. We also welcome visitors to view our classrooms.

We hope this brochure answers your request. If we can be of further assistance, feel free to write or call.

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or

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